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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,679	12/17/2004	Michael Bergt	20828/0205162-US0	2312

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EXAMINER	
HUNTE, AISHA K	

ART UNIT	PAPER NUMBER
3769	

MAIL DATE	DELIVERY MODE
07/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/501,679	BERGT ET AL.	
	Examiner	Art Unit	
	AISHA HUNTE	3769	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07/16/2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/16/2004, 08/12/2008, 10/17/2008, 05/11/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The terms "geometrically predeterminable form" and "chronologically predeterminable course" are not mentioned in the specification.

Claim Objections

Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Using the device to machine an organic material is language directed to the intended use of the claimed invention and is given no patentable weight. Claim 13 recites no additional structure to the claimed device.

Claim 26 is objected to because of the following informalities: Claim 26 depends on a cancelled claim. For examination purposes claim 26 will depending on claim 22. Appropriate correction is required.

Claim 25 is objected to because of the following informalities: the word surgery is misspelled. Appropriate correction is required.

Claim 12-26 are objected to because of the following informalities: the use of the abbreviation fs for femtosecond. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16 and 20-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 16 and 20-21, the claim language is incoherent.

Claims 20-21 recite the limitation "the beam apparatus" in first lines of claim 20 and 21. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 12, 14, and 19 are rejected under rejected under 35 U.S.C. 102(b) as being anticipated Incorporation of a Cavity-dumped Oscillator In a Long Wavelength Injected Femtosecond Terawatt Ti:sapphire Laser, by Cha et al.

Regarding claim 12, Cha et al. disclose a pulsed laser system having a beam source, wherein the beam source includes a cavity-dumped femtosecond oscillator (figure 1).

Regarding claim 14, Cha et al. disclose a beam apparatus for beam focusing (concave mirrors M1 and M2, figure 1).

Regarding claim 19, Cha et al. disclose the cavity-dumped femtosecond oscillator is
configured to provide laser pulses with a repetition rate of 167 kHz (figure 2).

Claims 12, 15-17, 20-21 are rejected under rejected under 35 U.S.C. 102(e) as being anticipated by Borrelli et al. (US 2003/0099452 A1).

Regarding claim 12, Borrelli et al. disclose a pulsed laser system 10 (figure 1) for machining a glass substrate 30 (figure 1), wherein the beam source includes a cavity-dumped femtosecond oscillator (paragraphs 0030 and 0031).

Regarding claims 15-16, Borrelli et al. disclose the motion table 22 (figure 1), which holds the glass substrate (20) can be programmed to position the glass substrate (paragraph 0037).

Regarding claim 17, Borrelli et al. disclose the cavity-dumped femtosecond oscillator is configured to provide laser pulses having a pulse energy of 0.75 μJ (paragraph 0059).

Regarding claim 20, Borrelli et al. disclose the laser system is configured to be translated with velocity in a helical pattern, so that the pattern is machined on to the glass (paragraph 0059). This movement requires that the helical path is traced in a chronological order.

Regarding claim 21, Borrelli et al. disclose the beam apparatus includes a beam deflection device (beam divider 82, figure 10). Borrelli et al. teaches that the repetition rate of the working beam can be varied along the waveguide during application of the working beam to the glass substrate (paragraph 0045).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 12-13,18, 22-23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haight et al. (US 6333485) and further in view of Cavity-dumped Oscillator In a Long Wavelength Injected Femtosecond Terawatt Ti:sapphire Laser, by Cha et al.

Regarding claims 12-13 and 22, Haight et al. disclose a system and method for generating laser induced breakdowns, which include photo-disruptions (column 1, lines 14-17; column 11, lines 7-15), on the surface of a material (abstract). The system uses a pulsed laser beam (figure 5) which produces a working beam with pulse width duration from nanosecond down to the femtosecond range. This is accomplished by generating a short optical pulse having a predetermined duration from a laser oscillator (column 7, lines 10-27). Haight et al. recommends using a Ti:Sapphire oscillator (column 2, lines 48-51). Haight et al. does not disclose that the oscillator is cavity-dumped. Cha et al. teaches a method of incorporating a cavity-dumped oscillator into a Ti:Sapphire laser. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Haight et al. method and device to incorporate a cavity-dumped oscillator into the pulsed laser system, as taught by Cha et al., because incorporating a cavity-dumped oscillator can increase the pulse energy by 30 times (page 417), which would allow the operator to use a less energetic pumping laser, hence giving the operator more choices to use in the laser system.

Regarding claims 23 and 25-26, Haight et al. disclose the generating laser induced optical breakdowns in corneal tissue (column 10, lines 38-64). It would have been obvious to one of ordinary skill in the art to provide the corneal tissue from either a human or an animal.

Regarding claim 18, Haight et al. disclose that in its final state there is 0.001 to 1,000 millijoules (1 μJ to 1,000,000 μJ) (column 2, lines 46-48) energy per pulse.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haight et al. as applied in claim 22 above, an further in view of Gross et al. (US 2004/0111083 A1). Haight et al. disclose all of the claimed limitations except for guiding the pulsed laser beam onto the material using a deflection apparatus and modifying a repetition rate of the in relation to a spot pattern produced on the material. Gross et al. teach a method of laser surgery that uses motor drivers 60 (figure 4, paragraph 0046) to deflect the beam and modifies the pulse repetition rates in relation to the spot pattern produced on the eye (claims 1 and 22). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Haight et al. to use a motor driver to deflect the laser beam and to and modify the pulse repetition rates in relation to the spot pattern, as taught by Gross et al., for the purpose of controlling temperature of the tissue (paragraph 0010).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AISHA HUNTE whose telephone number is (571)270-7835. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Johnson can be reached on (571) 272-4768. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Henry M. Johnson, III/
Supervisory Patent Examiner, Art Unit 3769

/AISHA HUNTE/
Examiner, Art Unit 3769